

CURIDIA MAGELLANICA, NEW SPECIES,
FROM MAGELLAN STRAIT
(CRUSTACEA: AMPHIPODA: OCHLESIDAE)

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Abstract. — The new species, *Curidia magellanica*, differs from similar species, *Curidia debrogania* and *Ochlesodius spinicornis*, in the strong development of the pointed projections on peduncular articles 1 and 2 of antenna 1 and the fourth article of antenna 2. The coxal plates of pereopods 2 and 3 of *Ochlesodius spinicornis* are apically truncate, in *Curidia magellanica*, rounded and subacute, respectively. The maxillipedal palp is much longer in the new species compared to *Curidia debrogania* and there are remnants of an articular suture, which might indicate relationships to the genus *Ochlesodius*. The classic genus *Odius* is an analogous morph in the Iphimediidae with many characters that might be considered plesiomorphic to the Ochlesidae; it has been relegated to a new family Odiidae by Coleman & Barnard (1991).

The genera and species of the family Ochlesidae are reviewed for the first time since its description by Stebbing (1910). A new diagnosis of the family is presented by Coleman & Barnard (1991), who also discuss its relationship to many similar families; here, a complete description of the family is presented. New keys for identification and lists of species are provided herein. The lists of species present each species with its describer and date followed in parentheses by one or more modern references, followed by geographical codes for distribution set in brackets; a list of these codes is found in Barnard & Barnard (1983:181–203).

Ochlesidae

Ochlesidae Stebbing, 1910:581.—Coleman & Barnard, 1991:259.

Description. — Body massive, compressed, one or more segments usually with large dorsal tooth. Head short from front to rear, but tall, partially enveloped by pereon. Rostrum large. Antennae short but thick, not longer than 5 pereonites, flagella sparsely articulate, accessory flagellum absent. Eyes

ordinary. Lateral cephalic lobes well developed.

Mouthparts grouped conically. Labrum elongate. Mandibular incisors moderately broad, smooth or weakly crenulate in middle, each end (side) bounded by small tooth; left mandible with spiniform lacinia mobilis, right absent or represented by small conical spine; palp 3-articulate, article 1 elongate or not; rakers absent; molar very small, poorly triturative or simple. Mandibular lobes of labium acuminate, inner lobes weak or absent. Inner plate of maxilla 1 small or indiscernible, outer plate subconical, spines mostly fused to base, palp vestigial though often armed with long seta. Lobes of maxilla 2 elongate, inner shortened. Inner plate of maxilliped acuminate, outer operculiform; palp small, 0–2 articulate.

Anterior coxae acuminate or oddly shaped: coxae 1 and 4 shortened relative to long and thin coxae 2 and 3, coxa 3 with posterodorsal buttress forming attachment to pereon; coxa 5 shorter than 4. Gnathopods feeble, gnathopod 1 simple or minutely parachelate, gnathopod 2 simple or subchelate, otherwise gnathopod 2 with

produced carpus and/or merus; articles 3–6 of gnathopod 1 slender, elongate, apical setae usually strap-shaped or grossly feathered. Article 2 of pereopods 5–7 well expanded, with posteroventral lobe. Gills on coxae 2–7, narrow, or apically geniculate; oostegites narrow and broad together in same species, thus narrow on coxae 2 and 5 but broad on coxae 3–4 or also broad on coxa 2 in another species. Pleopods ordinary. Epimera toothed or not.

Urosomites separate. Uropods 1–3 biramous but outer rami of uropods 2–3 shorter than inner; peduncle of uropod 3 elongate, thus longer than urosomites 2–3 together, inner rami of uropod 3 as long as or slightly shorter than peduncle, flattened, lanceolate, outer ramus 1-articulate. Telson entire or weakly incised, variable in size and shape.

Variables.—Body narrowing dorsally to thin continuous keel or segments forming flattened dorsal pedestals. Antennae cuspidate or not. Epistome and labrum highly variable, broad or narrow, long or short, incised or entire. Coxae variable. Dactyls of pereopods 3–7 elongate (*Ochlesis innocens*), or short (*Ochlesis lenticulosus*). Telson short or elongate, leaf-shaped or long and truncate.

Relationship.—Ochlesidae differ from Iphimediidae in (1) the produced merus and carpus of gnathopod 2; (2) the reduction of the maxillipedal palp to fewer than 3 articles; (3) the reduced antennal flagella; (4) the slender keel-like narrowing of the dorsal margin of pereonites 1–6, which also lack teeth; and (5) the peculiar though internally diverse forms of the anterior coxae, in which coxa 4 is strongly shortened, coxa 1 is disparately shortened, and coxa 4 occurs in grotesque shapes. The shortened condition of coxa 1 is of incremental degree, in that the shortened coxa 1 of Iphimediidae remains within the smooth parabola formed by the lower edges of coxae 4, 3, 2, and 1, whereas in Ochlesidae, coxae 2 and 3 are of equal length; no parabolic curve with coxa 4 is possible because it is shortened in such

fashion that the anterior coxae have a jagged appearance. The dorsal keel of the six anterior thoracic segments also is found in several members of Acanthonotozomatidae and in the genus *Dikwa* (Dikwidae), but in all of those, one or more of pereonites 1–6 has a dorsal tooth.

See Coleman & Barnard (1991) for additional comments on more remote taxa.

Key to the Genera of Ochlesidae

- 1. Palp of maxilliped 2-articulate *Ochlesodius*
- Palp of maxilliped 0–1 articulate 2
- 2. Body keel dorsally flattened, with plaques, pereonites with lateral plaques, telson linguiform, lateral margins curled upward *Meraldia*
- Body keel dorsally knife-like, pereonites smooth laterally, telson flat 3
- 3. Palp of maxilliped absent *Ochlesis*
- Palp of maxilliped 1-articulate *Curidia*

Key to the Species of Ochlesidae

- 1. Body keel dorsally flattened, with plaques, pereonites with lateral plaques, telson linguiform, lateral margins curled upward *Meraldia meraldi*
- Body keel dorsally knife-like, pereonites smooth laterally, telson flat 2
- 2. Coxae 1–3 not tapering, blunt or truncate apically, palp of maxilliped with 2 articles . *Ochlesodius spinicornis*
- Coxae 1–3 tapering, rounded or attenuate apically, palp of maxilliped with 0–1 article 3
- 3. Coxa 4 not excavate posteriorly, body with at least one large dorsal tooth 4
- Coxa 4 excavate posteriorly, body lacking large dorsal teeth 7
- 4. Epimeron 3 with tooth 5
- Epimeron 3 lacking tooth 6

- 5. Pleonites 2–3 only with dorsal rugae
..... *Ochlesis innocens*
- Pleonites 2–3 with strong dorsal
tooth *Ochlesis lenticulosa*
- 6. Pereonite 7 and pleonites 1–2 with
strong dorsal tooth, teeth present on
antennae 1–2 *Ochlesis carinata*
- Only pleonite 3 with strong dorsal
tooth, teeth absent on antennae 1–
2 *Ochlesis eridunda*
- 7. Antennae and epimeron 3 lacking
significant teeth *Ochlesis levtzowi*
- Antennae and epimeron 3 with sig-
nificant teeth 8
- 8. Teeth of antennae small, palp of
maxilliped absent *Ochlesis alii*
- Teeth of antennae medium to large,
palp of maxilliped 1-articulate 9
- 9. Palp of maxilliped shorter than ba-
solateral margin of outer plate, fla-
gellum of antenna 1 as long as ar-
ticles 1–2 of peduncle, coxa 3
expanded distally from coxa 4, an-
terodorsal hump of coxae 3–4 small,
pereonite 7 longer than pereonites
4–6 together, teeth of antennae of
medium length ... *Curidia debrogania*
- Palp of maxilliped longer than ba-
solateral margin of outer plate, fla-
gellum of antenna 1 as long as article
1 of peduncle, coxa 3 not expanded
distally from coxa 4, anterodorsal
hump of coxae 3–4 large, pereonite
7 not longer than pereonites 5–6 to-
gether, teeth of antenna long
..... *Curidia magellanica*

Curidia Thomas

Curidia Thomas, 1983:127 (*Curidia debrogania* Thomas, 1983, original designation).

Diagnosis. — Like *Ochlesis* but maxilliped with 1-articulate palp.

Species. — *C. debrogania* Thomas, 1983, western Caribbean [471]; *C. magellanica* Coleman & Barnard, herein, Magellan region [864].

Marine, Caribbean Sea, Belize, 6 m, and Magellan region, 92–101 m, 2 species.

Meraldia Barnard & Karaman

Meraldia Barnard & Karaman, 1987:857 (*Ochlesis meraldi* J. L. Barnard, 1972, original designation).

Diagnosis. — As in key.

Species. — *Meraldia meraldi* (J. L. Barnard, 1972) southern Australia [785].

Marine, Pearson Islands, South Australia, 35 m, 1 species.

Ochlesis Stebbing

Ochlesis Stebbing, 1910:581 (*Ochlesis innocens* Stebbing, 1910, monotypy).

Diagnosis. — As in key.

Removal. — *Ochlesis meraldi* J. L. Barnard, 1972, to *Meraldia*.

Species. — *Ochlesis alii* J. L. Barnard, 1970 (?*O. innocens* ID of Pirlet, 1936 and ?Schellenberg, 1938), Hawaii and Indonesia [381 + ?640]; *O. carinatus* Ledoyer, 1986, Walters Bank, bathyal [725wB]; *O. eridunda* J. L. Barnard, 1972, southern Australia [785]; *O. innocens* Stebbing, 1910, southeast Australia [781]; *O. lenticulosus* K. H. Barnard, 1940 (Griffiths 1974b, 1974c, 1975), southern Africa [743]; *O. levtzowi* Schellenberg, 1953 (Griffiths 1974a, 1974c), southern Africa [743].

Marine, Indo-Pacific from Hawaii to southern Australia and southern Africa, 0–200 m, 6 species.

Ochlesodius Ledoyer

Ochlesodius Ledoyer, 1982:48 (*Ochlesodius spinicornis* Ledoyer, 1982, original designation).

Diagnosis. — As in key.

Species. — *Ochlesis spinicornis* Ledoyer, 1982, Madagascar [698].

Marine, Glorieuses, 26 m, 1 species.

Curidia magellanica, new species

Figs. 1–4

Material.—Holotype, USNM 253546, female 2.4 mm, with setose oostegites; USNM 253547, 34 paratypes.

Type locality.—*Eltanin* St. 958 (52°56'S 75°00'W), Magellan region of south Chile; 5 Feb 1964; depth range 92–101 m; gear: 5' Blake trawl.

Etymology.—The species name refers to the type locality.

Description.—Body strongly compressed laterally, sharply ridged dorsally as shown in Fig. 1a; pereonite 1 forming a rostrum-like anterior process; pereonite 2 shortest; pereonite 7 longest, posterodorsal margin forming a tooth; pleonites 1 and 2 posterolateral margin roundly produced, posteroventral angle of epimera produced, posterodorsal margin slightly produced; pleonite 3 with dorsal hump, posteroventral margin of epimeron 3 with pointed tooth, urosomite 1 longest; urosomite 2 shortest. Head partially hidden by pereonite 1, eyes with 17 to 22 ommatidia, lateral cephalic lobe pointed anteriorly; rounded epistomal process between antennae 2.

Antenna 1 (Fig. 1b): article 1 broad, longer than 2, with ventromedial acute process exceeding first third of first flagellar article; article 2 with similar process exceeding half of first flagellar article; article 3 shorter than flagellar article 1; accessory flagellum absent; flagellum consisting of three articles, article 1 longest with aesthetascs ventrally. Antenna 2 (Fig. 1d): subequal in length to antenna 1; article 2 with subacute gland cone; articles 2 and 3 subequal in length; article 4 with long acute medial process almost reaching distal margin of peduncular article 5; article 5 as long as flagellum; flagellum consisting of 3 articles.

Labrum (Fig. 1c): elongated, tapering distally; epistome forming keel-like process. Mandible (Fig. 2d, e): styliform; incisor simple, very small, with cutting edge, slender lacinia mobilis on left mandible, absent

on right mandible; pars molaris small, cup-like weakly tritulative; palp 3-articulate, article 1 slightly expanded distally, 0.82 as long as article 2, article 2 longest, article 3 0.91 as long as article 2, curved ventrally, with linear comb row, apically with 3 short setae. Hypopharynx (Fig. 2f): slender, long and narrow apices. Maxilla 1 (Fig. 2a): inner plate small, outer plate styliform with 5–6 spine-like setae distomedially; palp uniaarticulate, short with long seta distally. Maxilla 2 (Fig. 2b); inner plate wider than outer plate with 8 setae distally; outer plate longer than inner plate with 10 setae distally. Maxilliped (Fig. 2c): inner plate slender, long (70% of outer plate), spine-like seta apically, row of setae on medial margin; outer plate rounded distally with several setae subapical; palp present, uniaarticulate (remnants of former articular suture visible under high magnification), 1 long and 1 short inconspicuous setae terminally.

Gnathopod 1 (Figs. 1a, 3a): coxa much shorter than coxa of pereopod 2 (65%), tapering distally; basis elongate, slightly longer than ischium and merus together; carpus and propodus subequal in length and width; propodus with some setae distally; dactylus with some plumose setae and one stout seta posteriorly. Gnathopod 2 (Figs. 1a, 3b): coxa elongated, rounded distally, anteroproximal angle overlapping coxa 1; basis elongate, ischium shorter than merus; posterodistal angle of merus bearing process; carpus longer than propodus, increasing in width distally, with setae on posterodistal process; dactylus stout, bifid with claw anteriorly (see detail of Fig. 3b).

Pereopod 3 (Fig. 3c): anteroproximal part of coxa rounded, overlapping coxa 2, postermarginal rounded process, coxa tapering distally to subacute tip; basis slightly increasing in width distally; ischium short and broad; merus with anterodistal acute process (carpus to dactylus missing). Pereopod 4 (Fig. 4a): coxa broad, anteriorly and posteriorly excavate, overlapping coxa 3 proximally; basis simple; merus similar in

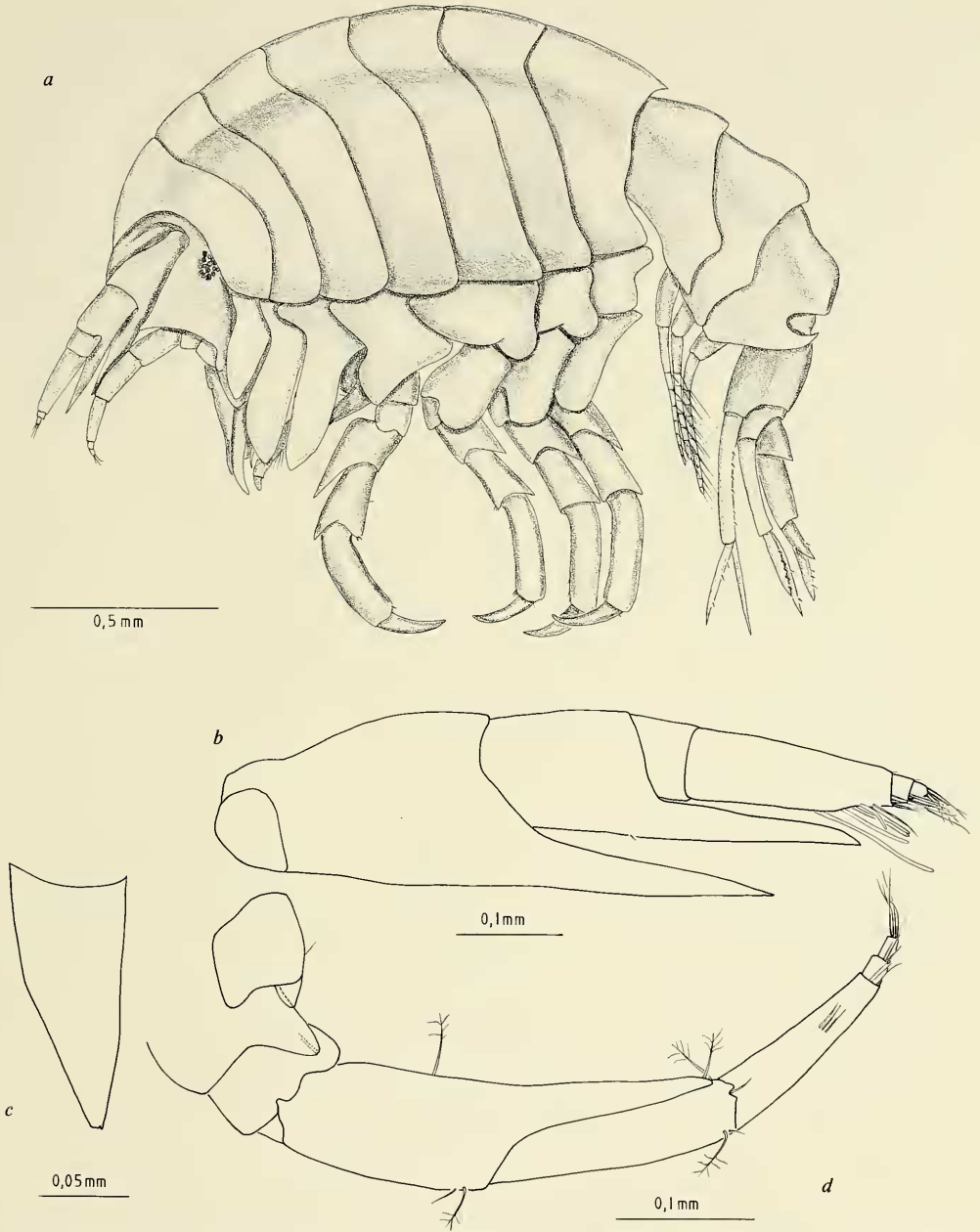


Fig. 1. Holotype of *Curidia magellanica* n. sp., female 2.4 mm. a, lateral habitus; b, antenna 1; c, labrum; d, antenna 2.

shape as to pereopod 3; carpus increasing in width distally with some spine-like setae posteromarginally, anterodistal angle slightly produced; propodus longer than merus, with some spine-like setae postero-

marginally; dactylus stout with terminal claw. Pereopod 5 (Figs. 1a, 4e): coxa very broad, anteroproximal corner produced, overlapping coxa 4; basis broad with inconspicuous ridge on lateral face, overlapping

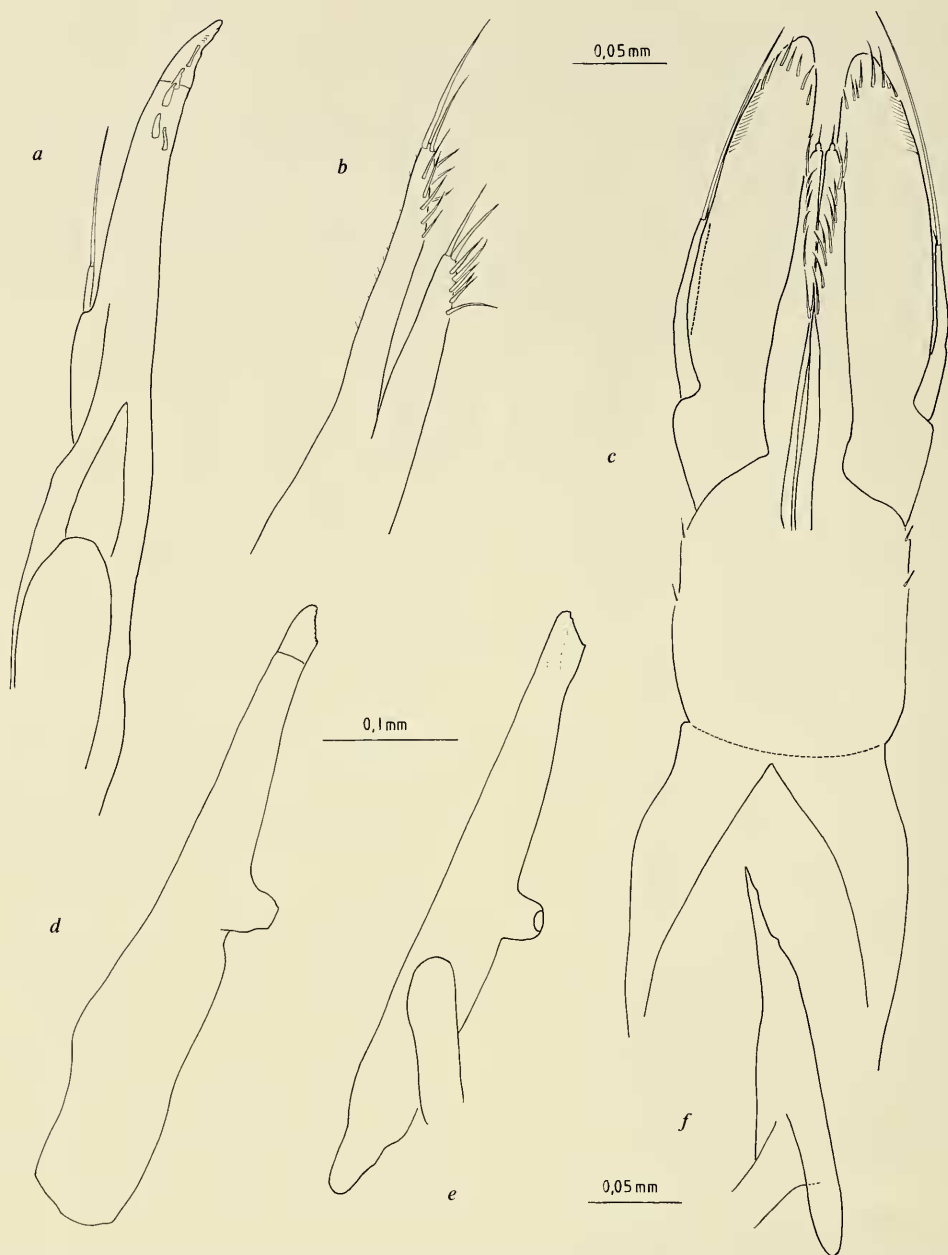


Fig. 2. Holotype of *Curidia magellanica* n. sp., female, 2.4 mm. a, maxilla 1; b, maxilla 2; c, maxilliped; d, left mandible; e, right mandible; f, part of hypopharynx.

ischium and merus with posterodistal lobe; merus broad with posterodistal process (carpus to dactylus damaged during dissection). Pereopod 6 (Figs. 1a, 4b): coxa broader than long, slightly excavate posteriorly,

anteroproximally lobate; basis similar in shape to pereopod 5 but slightly longer, merus broad with acute posterodistal process; carpus longer than merus, increasing in width distally, posterodistal angle slightly

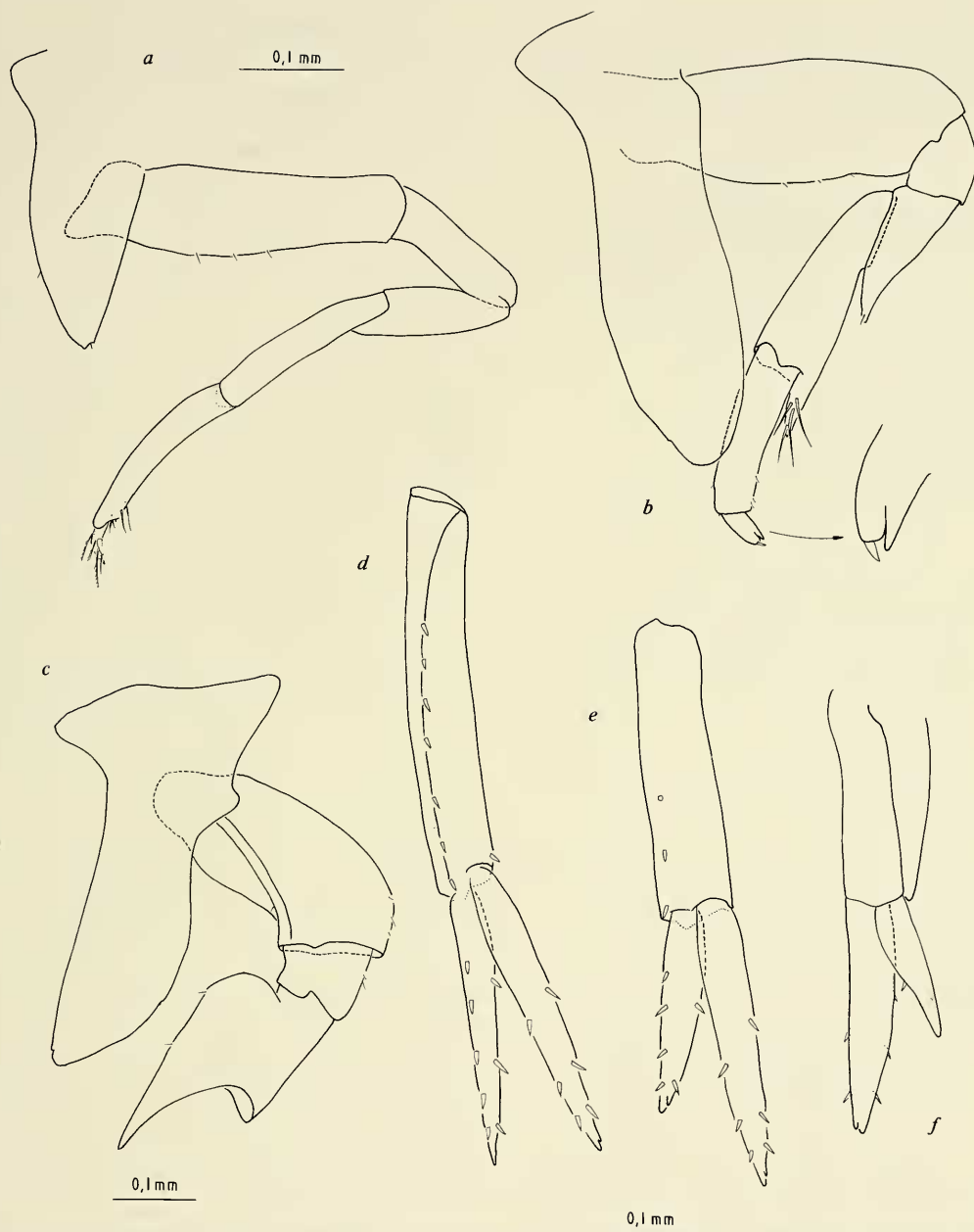


Fig. 3. Holotype of *Curidia magellanica* n. sp., female, 2.4 mm. a, pereopod 1; b, pereopod 2, detail showing dactylus with claw; c, pereopod 3; d, uropod 1; e, uropod 2; f, uropod 3, from ventral side.

produced; propodus longest with some spine-like setae anteromarginally; dactylus stout with terminal claw. Pereopod 7 (Figs. 1a, 4c): coxa small, with posteromarginal excavation; basis similar in shape to pere-

pods 5 and 6 but broader, anteromarginally sinuoid; ischium, merus, carpus and dactylus as for pereopod 6.

Gills present on coxae 2-7 slender, weakly sac-like but on pereopod 7 as long as

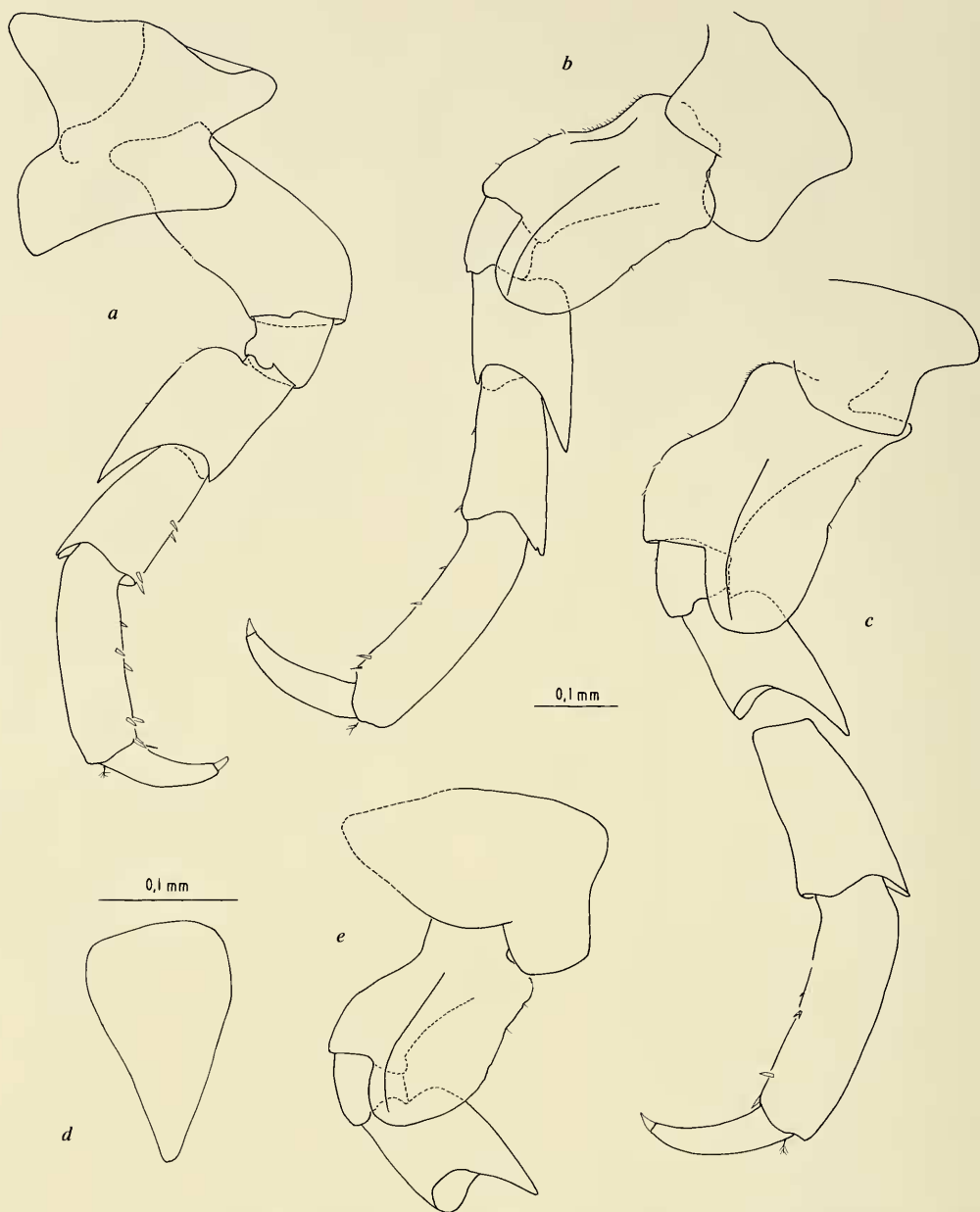


Fig. 4. Holotype of *Curidia magellanica* n. sp., female, 2.4 mm. a, pereopod 4; b, pereopod 6; c, pereopod 7; e, pereopod 5. Paratype, ovigerous female, 2.9 mm. d, telson.

broad. Oostegites on coxae 2–4 broadly expanded distally, rounded, oostegite of coxa 5 short and slender.

Uropod 1 (Figs. 1a, 3d): slightly reaching

beyond uropods 2 and 3, peduncle elongate, longer than rami, with row of spiniform setae dorsolaterally; rami subequal in length, some spine-like setae on both margins. Uro-

pod 2 (Figs. 1a, 3e): peduncle subequal to inner ramus, length of outer ramus $\frac{2}{3}$ of inner ramus, rami with spine-like setae on both margins. Uropod 3 (Figs. 1a, 3f): peduncle stout; inner ramus longer than outer ramus. Telson (Fig. 4d, from paratype): entire, elongate, tapering distally.

Descriptive note.—Because the mandibular palp and telson were damaged on the holotype, descriptions are taken from a paratype ovigerous female 2.9 mm.

Discussion.—The Ochlesidae consist of the apomorphic genera *Meraldia* Barnard & Karaman (1987) and *Ochlesis* Stebbing (1910) lacking a maxillipedal palp and the plesiomorphic genus *Curidia* Thomas (1983) with an uniaarticulate palp. The plesiomorphic genus *Ochlesodius* Ledoyer (1982), bearing a 2-articulate maxillipedal palp, was placed with the Iphimediidae by Ledoyer (1982). This genus should be moved to the Ochlesidae, which seem to be related to the Iphimediidae (compare Bousfield 1978). Ledoyer (1986) points at the similarity between *Ochlesis* and *Odius*, an iphimediid “à laquelle ils [the ochlesids] pourraient être rattachés.” On the contrary, Coleman & Barnard (1991) moved *Odius* to the new family Odiidae because it has more characters in common with the Ochlesidae and does not fit well in the Iphimediidae.

The new species is relegated to the genus *Curidia* owing to its uniaarticulate maxillipedal palp by which it is separated from *Ochlesodius spinicornis* Ledoyer, 1982. Although the body shape of the new species is similar to *Curidia debrogania* and *Ochlesodius spinicornis*, the new species is clearly distinguished from those species by the strong development of the pointed projections in the peduncular articles 1 and 2 of antenna 1 and the fourth article of antenna 2. The coxal plates of pereopods 2 and 3 of *Ochlesodius spinicornis* are apically truncate, in *Curidia magellanica* rounded and subacute, respectively. The maxillipedal palp is much longer in the new species com-

pared to *Curidia debrogania* and there are remnants of an articular suture, which might indicate relations to the genus *Ochlesodius*.

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